

ABSTRACT

Supported catalysts which allow shortening of the production steps for supported catalysts useful for 5 production of lower aliphatic carboxylic acids from lower olefins and oxygen, and which compared to supported catalysts of the prior art, can inhibit generation of carbon dioxide ( $\text{CO}_2$ ) gas by-product during the production of lower aliphatic carboxylic acids. A compound 10 containing at least one element selected from Group 8, 9 and 10 elements of the Periodic Table is loaded on a carrier and then, before reduction treatment of the compound, it is subjected to alkali treatment with an alkaline substance, and a compound containing at least 15 one element selected from gallium, indium, thallium, germanium, tin, lead, phosphorus, arsenic, antimony, bismuth, sulfur, selenium, tellurium and polonium is loaded.